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AUTHOR Packard, Richard D.; Dereshiwsky, Mary I.
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ABSTRACT

Presented is the fourth Summative Report developed by Northern Arizona University researchers for the Joint Legislative Committee on Career Ladders (JLCCL) concerning the implementation of the Arizona Career Ladder Program (ACLP). The ACLP has resulted in considerable developmental success toward meeting intended program goals. This report is divided into two sections. The first section contains final summative findings, reports, and recommendations for program modifications. Final assessment, analysis, and policy recommendations by the JLCCL and the Task Force are included. Task Force directives describe organizational environment and readiness levels as well as Task Force program goal priorities (student achievement; teacher evaluation and placement; job enlargement; and salary, finance, and budgetary considerations). The second section is an extension of the initial Task Force assignment and examines: (1) expanded evaluative response to legislative guidelines not previously reported; (2) specific legislative staff questions identified as needing attention; and (3) recommendations of additional policy that involves important elements not previously included in the legislation. Appended are five figures and two exhibits. (SI)

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PROGRAM EVALUATION AND ORGANIZATIONAL CHANGE:

A Profile of Strengths and Insufficiencies in Readiness

Impacting Policy Recommendations, Change & Restructuring

of a Comprehensive Statewide Educational Reform Movement

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by

Dr. Richard D. Packard, Director
&
Dr. Mary I. Dereshiwsky, Associate Director

The CEE / R & D Partnership

Center for Excellence in Education - Northern Arizona University

Box 5774 - Flagstaff, Arizona - 86011

Ph: (602) 523-5852

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FINAL SUMMATIVE FINDINGS, REPORTS & RECOMMENDATIONS FOR PROGRAM MODIFICATIONS OF THE ARIZONA CAREER LADDER RESEARCH AND EVALUATION PROJECT

Designing Successful Reform
in Education

> Over the past hundred years great quantities of resources, including large expenditures of tax dollars, have been allocated for the specific purpose of change and improvement in education; however, most of these reform movements have not resulted in any appreciable success. The failure of these well-intentioned interventions has not been attributable to the goals and objectives of the programs (i.e., enhancing the teaching profession, developing teacher competency or improving student achievement), but rather to dysfunctions of particular interrelated operational components within total school systems or organizations.
>
> (Packard, 1989)

Overview of Major Program Successes

The Arizona Career Ladder Program has provided the Center for Excellence in Education at NAU enough time to demonstrate that the career ladder program concept has resulted in considerable developmental success toward meeting intended program goals. Overall, the career ladder intervention program has demonstrated that educational systems can reform and change in a positive direction through rewarding and motivating teachers based on performance. In addition, such systems are accounting for that performance through more than just the processes of evaluating teachers' classroom methodologies. Districts and teachers have made considerable progress in actually demonstrating positive effects on student achievement through valid curricular content which has been planned to meet student needs in each local district and school.

The second major program success relates to the extended time and additional responsibilities which have enlarged critical job assignments of teacher leaders. This

program encourages teachers to move from the isolation of individual classrooms and empowers them to assume major responsibilities in assisting schools, districts and the total community in meeting the social, emotional and academic needs of students.

Summative Research and Evaluation Reports

On November 29, 1988, the NAU researchers presented to the Joint Legislative Committee on Career Ladders (JLCCL) an interim summative document, RESEARCH & EVALUATION: A Focused Design to Improve Teacher Development and Student Achievement for Enhanced School Effectiveness (R & E/88 -- ERIC ED 302 533). The national "Educational Resources Information Center" (ERIC), and its "Resources in Education" (RIE), has published and continues to disseminate this and many other papers and documents developed and presented by the researchers.

Final summative evaluation reports related to the Arizona Career Ladder Research and Evaluation Project began on July 20, 1989, with a morning presentation to the JLCCL of an Executive Summary (ES/89) and A Chronology of Research and Evaluation Procedures for Assessment of the Pilot-Test Career Ladders Teacher Performance and Incentive Programs (CRE/89). Initial recommendations for study were presented to the Committee's Task Force that afternoon in the form of a report entitled, EDUCATIONAL REFORM IN ARIZONA: A Preliminary Planning Document Based on Long-Range Research and Evaluation (ERA/85 to 90).

In September and October the following two documents were prepared for the JLCCL and its Task Force: (1) SUMMATIVE REPORT II: Summative Report & Recommendations for Program Modifications of the Arizona Career Ladder Research &

In August and September the project and research findings were featured in the Southern Regional Education Board's Career Ladder Clearinghouse report: Furtwengler, C. & Cornett, L. (Comps. and Eds., 1989). *Evaluating Career Ladder/Incentive Programs*. SREB, 592 Tenth Street, N.W., Atlanta, Georgia, and in Horizons: Opportunities For Tomorrow, *Are Students and Teachers Making the Grade* by Lisa Nelson (1989) Office of the Associate Vice President of Academic Affairs for Research and Graduate Studies (Ed.), Northern Arizona University, Flagstaff, AZ.

Evaluation Project; and (2) SUMMATIVE REPORT III: Extension of Summative Report II . . . for evaluation and recommendations which related to research findings and their impact upon legislative policy in areas not previously analyzed. Other documents presented prior to this time were quantitative and qualitative research reports and formative summaries depicting the progress and development of career ladder district plans and project evaluation results.

The summative nature of this report does not imply that formative research and evaluation has ended. The 1989 data is still in the process of being analyzed and summarized for reporting to participating districts, so that they may continue to develop and improve their individual programs through the approved and funded cycle. Also, in cooperation with NAU, the ASU study continues through its third year of commitment in researching program effects on student achievement

JLCCL and Task Force Organization for Final Assessment, Analysis and Policy Recommendations

The Joint Legislative Committee on Career Ladders established a Task Force to review program evaluations for the purpose of formulating and recommending final policy for consideration during the upcoming 1990 session of the state legislature. The primary purpose of the first formal meeting of the Task Force was to determine the processes and procedures to be followed in its operation. Discussion centered around several questions to be addressed and the way in which participants planned to review and study the complex and extensive amounts of information which have accumulated from several sources during the past four years. The committee decided that the next meeting would be scheduled for September 14, 1989, in order to receive reports from the districts represented on the Task Force and from the "outside" or "third-party" evaluators at Northern Arizona University's Center for Excellence in Education. Each district is required by legislation to conduct its own yearly program evaluation. Third-party "total-program evaluators" at NAU were established by law and directly approved by the JLCCL to provide objective assessment,

review and evaluation/interpretation of data. This model has proven effective for informed decision making by policy leaders.

Task Force Directives

Through the senate chair of the JLCCL, the Task Force requested that the districts and NAU separately develop and present evaluative information related to two major concept areas: (1) the type of *organizational environment* (or district *readiness levels*) required for successful integration and implementation of operational career ladder models; and (2) provision of evidence of the impact of the intervention program on identification and improvement in levels of effectiveness of four major areas considered to be key elements to the success of the career ladder concept. The four career ladder goal areas which the Task Force identified as essential for immediate consideration are as follows: 1) *student achievement; 2) teacher evaluation; 3) job enlargement;* and *4) finance and funding*.

A. Organizational Environment and Readiness Levels

1. Policy Uniformity vs. District Diversity. A major consideration for Task Force analysis relates to the question of whether more than one program model is required in order to attain the desired goals of improved teacher performance and student achievement by means of the career ladders concept. This is part of the more general issue of program effectiveness in influencing recruitment, retention and motivation of high-quality professionals.

   a) Related Legislative Guidelines. In 1988, S. B. 1195 essentially included the original policy guidelines of S. B. 1336 (developed in 1985) and S. B. 1384 (revised in 1986). It also extended the pilot program stipulations providing funding for the districts through 1990-91.

      [S. B. 1195 (Section 9. A.) states, in part,

      "If the recommendation of the joint legislative committee on career ladders is to allow continuation or statewide participation in the career ladder program, the recommendation shall include recommended

requirements for career ladder plans to replace the requirements prescribed in section 5 of this act."

b) General Research Findings. *Research and evaluative evidence has indicated that extreme diversities exist among districts with respect to their readiness to support change and improvement programs such as career ladders. These diversities, as reflected within organizational profiles and corresponding differences in individual assessed needs, require determination of the types of career ladder model programs which would support such differences in developmental levels or readiness stages. Some districts have made considerable progress toward success with the present legislative guidelines and standard structures and design models, while several others are experiencing difficulties with program implementation within the short time period allowed for change. On the average, change theory indicates that it takes a minimum of six years for the effects of major intervention and change phenomena to be realized.* (Please see Figures 1 and 2, pp. 40-41, for an example of some of the interrelated support and focus factors to be assessed for district model placement.)

c) Recommended Program Continuations and Modifications. Based on the legislative guidelines and the research and evaluation findings, the following recommendations are in order:

(1) **Present pilot-test districts should be placed on a continuation basis; that is, they should be provided with the authorized level of funding for a three-year period to enable them to reach an "Effective Schools Level" of operation.** This would involve such activities as meeting program requirements of curriculum development; validation of all evaluation systems for students, teachers and administrators; making realistic adjustments in salary plans based on financial capabilities of the district and state; and improving other key

interrelated organizational support and focus factors. If these pilot-test districts are unable to achieve needed changes within a three-year period of time, then they should be placed on a "transitional" or "developing" level, which would constitute a continuing assessment and profiling cycle. After another three years of developmental effort, a determination would again be made regarding the district's appropriate career ladder placement level.

Depending on state funding capabilities, planning for statewide participation is presently warranted. If statewide implementation is forthcoming, a plan for assessing and approving new districts would need to be devised and the total state program should be subject to review and modifications every three to six years. New districts would voluntarily apply and be phased into one of the above-mentioned model levels, based upon the state's ability to generate adequate revenue to support their participation.

(2) Recommendations for Career Ladder Models. **A minimum of two to three types of program models are required to meet the developmental stages of school districts.** During the initial *planning stage,* each approved district, based on state funding potential (please see the section on salary and funding), would be *assessed* and *profiled.* (Figure 3, p. 42, illustrates examples of assessment and placement levels; Figures 4 and 5, p. 43 and 44, show sample profiles of strengths and weaknesses related to support and focus factors.) Each district would then be placed into one of the three categories described below:

(a) Effective Schools Career Ladder Model - Level III (ESCLM)

The ESCLM would essentially meet the intent of career ladder legislation and district plans, designs and structures presently in

operation. Districts would be supported at a maximum approved level based on the funding formula. They would be placed in this category as a result of being assessed and profiled as effective operational systems which clearly provide accountability in meeting program goals. These districts should be assessed and profiled on a cyclical basis every three to six years; in addition, they should continue to work on needed improvements and other modifications identified as being desirable. Teachers would have the opportunity for competitive placement within any one of the maximum number of approved career levels in their district, i.e., Levels I, II or III.

(b) Transitional Schools Career Ladder Model - Level II (TSCLM)

The TSCLM would be funded at a transitional level for a period of three to six years, as a means of attaining the following purposes: (1) developing and improving organizational weaknesses with the assistance of teacher leaders qualified for identified job enlargement functions; and (2) refinement of a district system which can validly account for the impact of district, school and teacher performance on student achievement.

Teachers would have the opportunity to compete for placement in the lower number of approved career levels in their district, i.e., Levels I and II. The maximum number of teachers recruited for this program model should not exceed 50% of the total teacher population.

(c) Developing Schools Career Ladder Model - Level I (DSCLM)

The DSCLM would be funded at a minimum level for a period of three to six years, for the purposes of changing and improving organizational weaknesses with the assistance of teacher leaders qualified for job enlargement functions. These functions would be

determined through the organizational needs assessment and profiling procedure. Examples of such components include curriculum, student learning and assessment, and job enlargement assignments related to social and demographic requirements of the unique district environment (i.e., cultural/language needs; retention programs; and assisting with the correction or improvement of other social/behavioral conditions which affect student progress.) A Level I position would be the maximum career opportunity level for teachers in this type of district. The number of district teachers recruited for program development should not exceed 20-25% of the total teacher population.

(3) **Due to the extreme diversities in school organizations, it is important that the policy allow for flexibility in the required amount of time to plan, implement and improve the program at all levels, based on individual district stages of development and local conditions for change.**

(4) **In 1985, the Center for Excellence in Education at NAU was designated to evaluate the pilot-test program; however, there was a critical oversight with respect to the usual provisions of funding the research efforts.** An objective **"third-party"** research and evaluation operation is necessary in order to insure district accountability for meeting program specifications and for efficiency and effectiveness in expending state funds. Districts require unbiased evaluations and profiling of strengths and weaknesses in order to be placed at the appropriate model level and to meet individual developmental needs.

B. Task Force Program Goal Priorities

1. Student Achievement. The primary goal of the career ladder programs is to enhance *student achievement.* Therefore, program requirements related to progress in demonstrating accountability for improving student achievement were given a high priority by the Task Force.

   a) Related Legislative Guidelines. Section 5. "Requirements for career ladder plan," essentially remained the same with respect to student achievement for Senate Bills 1336, 1384 and 1195.

> "Sec. 5. Requirements for career ladder plan. To receive approval to budget for a career ladder program as provided in section 4 of this act, a school district's career ladder plan must contain the following:
>
> 1. . . .
> 2. How the plan is designed to improve student academic achievement."

   b) General Research Findings. ***While all participating districts have met the stated legal requirements of the plan (point #2, above), few of them have actually been able to demonstrate tangibly the effects of the program on improved student achievement.*** *In particular, several districts have been unable to develop adequate scientific and technological support required to do the following: 1) establish a valid curriculum and student assessment program based on that curriculum; 2) relate process evaluation of teacher skill levels to* **product** *evaluation of student achievement gains; 3) develop teacher capability to pre- and post-test students' learning and determine the significance of related achievement gains; and 4) reliably associate teacher performance levels with student achievement based on state or national standardized and normed tests* (i.e., the State Superintendent of Public Instruction and the Arizona Department of Education are making considerable headway with the development of the Arizona Student Assessment Plan, which

needs to be combined with the establishment of a valid curriculum and student assessment plan in career ladder districts.) *Those districts which have valid and reliable teacher evaluation systems are beginning to demonstrate a connection between teacher performance levels and student achievement. To the researchers' knowledge, this has not been accomplished before in education on such a large scale.*

c) Recommended Program Continuations and Modifications. Based on the legislative guidelines and the research and evaluation findings, the following recommendations are in order:

(1) **Districts should continue to show "how the plan is designed to improve student academic achievement." At the same time, legislative guidelines need to be expanded to include requirements for demonstrating accountability for student achievement. Districts should be placed at their appropriate stages of "developing," "transitional," or "effective schools levels," based upon their current operational capabilities, analogous to teachers' placement on career-ladder levels according to their demonstrated accountability for student achievement.**

(2) **Districts placed on the Developing Schools Career Ladders Model (Level I) should devise a long-range plan of improving accountability for student achievement throughout the total system (district, school and teacher).** In particular, this plan should contain a detailed description of procedures for developing valid and reliable measures within each unit of the entire system. Before being eligible for the transitional model, all teachers within the district should have received professional development in pre- and post-assessment and be

able to demonstrate individual student and group gains with respect to curricular objectives being taught in their classrooms.

Those districts using the DSCLM are not yet capable of directly connecting teacher performance with student achievement. Therefore, their career ladder teachers should be assigned to "Placement Level I," applying their extended time and responsibilities in providing leadership to develop and validate curricular objectives, teaching methodologies and school programs which are closely associated with student achievement.

(3) **Districts placed on the Transitional Schools Career Ladders Model (Level II) should continue to develop their teachers by means of extensive job-enlargement assignments.** In addition, they need to refine and validate a curriculum to track assessment of student learning on the classroom, school and district levels over a long-range period of time.

(4) **Districts would be eligible for the Effective Schools Career Ladders Model (Level III) when the system is able to implement a program which can validly and reliably account for student achievement based on at least two types of measurement.** The two measurement requirements to be monitored on the district, school and teacher levels are identified and described below:

(a) In order to account for student improvement throughout the long term, a sound and well-developed curriculum (including content objectives) which is designed for students within the local community would be validated and normed on quantitative and qualitative measures which can be reliably tracked. Districts would then be able to assess and compare improvement in student achievement more equitably within the local environment. **Local districts should not be held**

accountable to an unrealistic standard in comparison to other schools with different curricular needs, or directly compared to communities which have environments that may be extremely divergent from their own.

(b) At least one other standardized state or national measure for district accountability should be required. Appropriate norming should occur on the local level in order to prevent unfair or misleading comparisons across diverse districts, as well as to enhance accountability. Specifically, this means that each district (and the schools contained within it) should norm the state-approved or accepted standardized tests. Each district should also be able to assess teacher, school and district improvement throughout an extended time period, in order to determine the local impact of its particular career ladders program on student achievement.

2. Teacher Evaluation and Placement. *Teacher evaluation* and *placement* was identified by the Task Force as another key program consideration. The purpose of the career ladder concept is to reward teachers based on levels of performance. Therefore, such components of teacher evaluation as improvement of classroom skills and related extended job responsibilities (which require greater time commitments and higher levels of expertise) and directly impact student achievement were a logical focus of immediate attention.

a) Related Legislative Guidelines. Section 5., Paragraph 4 of the career ladder legislation states, in part,

> "The criteria for advancement shall be challenging enough that not all teachers are expected to advance to the highest level. Movement, either upward or downward, on the career ladder shall be conditional and based on the evaluation procedures as provided in paragraph 6 of this section."

Paragraph 6 relates to the evaluation procedures contained within the career ladder program for teachers. It states that,

> "the evaluation procedures shall be based on the evaluation system as provided in section 15-537, Arizona Revised Statutes, and shall include at least the following:
>
> (1) More than one measure of teacher performance including performance in relation to student academic progress.
> (2) An explanation of the procedures used to determine that the measures of teacher performance are fair and objective.
> (3) Opportunities for improvement of teacher performance."

b) General Research Findings. *Research indicates that most districts are doing an excellent job of building on past evaluation procedures of assessing teaching input and* ***process.*** *At the same time however, few of them have attained the primary objective of validly connecting teaching performance levels to the content* ***product*** *(or output) of student academic achievement. Performance-based systems require multiple and specific criteria which are appropriately clear and developmental in nature and scientifically connected to student achievement.*

The criteria in most evaluation systems are "challenging enough," but they deal to a greater degree with evaluating teachers' adherence to lesson-plan procedures and "cook-book" methodologies, rather than with the level of academic content and accountability demonstrated in student learning. Several districts appear to have "measures of teacher performance" which are "fair and objective," but most have not conducted reliability and validity studies on their evaluation systems in order to demonstrate clearly the connection between classroom performance and achievement.

A particularly notable success of the career ladder teacher development and incentive program has been the expanding variety of professional "opportunities for improvement of teacher performance." Teachers have been found to be

extremely dedicated to professional development; they have expended extensive amounts of time and effort in support of district and state guidelines and directives for improving education.

While teachers are very enthusiastic and professional about following requirements, a major problem has developed with respect to district self-monitoring of program success. Several districts are not yet able to apply or assess the efficacy of evaluation and improvement programs systematically and objectively in the short implementation time allowed.

c) Recommended Program Continuations and Modifications. Based on the legislative guidelines and the research and evaluation findings, the following recommendations are suggested:

(1) **The career ladder program should continue to require districts to meet the specifications of Section 15-537 of the Arizona Revised Statutes, as well as the more specific policy of connecting "teacher performance in relation to student academic progress."**

(2) **The law needs to require more than "an explanation of the procedures used to determine that the measures of teacher performance are fair and objective."** Individual districts' evaluation systems need to be assessed to determine their current levels of readiness for effective placement of teachers on the ladder. More specifically, this should be accomplished by districts progressing through the developing, transitional and the effective schools model levels based upon objective validation of their systems.

Extreme diversities with respect to districts' readiness levels require that teacher evaluation and improvement systems be modified within a time frame which would support

the unique change conditions affecting each district. That is, districts have experienced differences in change conditions which affect their ability to develop with respect to required time and technological sophistication. Such differences in ability to adjust to change should therefore be directly incorporated into recommended programs.

(3) **Career ladder policy should provide for the establishment of an objective and effective evaluation system, which would include the following components:**

(a) establishment of a valid curriculum, including educational objectives, which meet local needs;

(b) validation and norming of tests to be used to determine student progress with respect to content being taught, which in turn is based on local curricular objectives;

(c) local norming of a state or national standardized test within each district, school, subject and grade level; and

(d) validation of the teacher evaluation system through determination of the relationship between levels of assessed teacher performance (*process* evaluation) and results of student progress (*product* evaluation).

Those districts capable of progressing through the foregoing developmental phases would warrant placement in the "Effective Schools Career Ladders Model." In order to merit this placement, it is necessary for districts to re-allocate their efforts; that is, to spend proportionately less time on process evaluation and more time on product evaluation. Furthermore, teachers are devoting too much time to the technicalities of classroom performance. They need to concentrate more on the

development of a curriculum, with related testing and evaluation of content which is linked to differences in developmental levels of their students.

As districts move from the developing career ladder model to the effective schools model, the evaluation system should progress from process to product evaluation. Developing schools which are not yet capable of reliably assessing student achievement based on valid procedures would rely on process evaluation to a greater degree. Effective schools, in contrast, would balance evaluation systems by using more product evaluation procedures. Advanced teachers in effective schools should have an evaluation system which would allow for creative and imaginative varieties of teaching methodologies, rather than having to follow a more rigid "cook-book" process of instruction. Creative and unique methods of teaching have in fact been found to result in greater student progress and achievement.

(4) Since research has shown that teacher input into change systems is of utmost importance, it is crucial that the evaluation system be assessed and refined on a continual basis, with teacher leaders playing a major role in all stages of its improvement.

3. Job Enlargement. The Task Force was very astute in recognizing the importance of the influence which teachers could have in assisting districts through extended time involvement and greater instructional responsibilities. The principle of *job enlargement*, or delegation of expanded duties, has been found to be as workable and intrinsically motivating in education as in private industry.

a) Related Legislative Guidelines. Section 5. Requirements for career ladder plan, paragraph 3, relates to provisions for job enlargement.

"(b) Improved or advanced teaching skills combined with one of the following:

(i) Other skills.
(ii) Additional responsibilities.
(iii) Other skills and additional responsibilities."

b) General Research Findings. *Practical experience has shown that improving those aspects of district organizational structure which relate to teacher skills development and accountability for student progress is a very complex and time-consuming endeavor. As is the case for top-level management in the private sector, administrators are faced with numerous pressing responsibilities, such as those related to personnel, budgets and facilities, all of which place excessive demands on their time. Delegating increased responsibility to teacher leaders would not only help to alleviate this problem, but would also improve the overall instructional program of the school as a result of wider professional participation and input.*

In order to be maximally efficient and effective, job enlargement responsibilities must be systematically planned to meet local district profiled needs related to both the social and academic concerns of the community and school system. The following is a brief explanation of the parameters of these two major areas:

(1) *Individuals' potentials for learning are greatly influenced by the particular environment in which they live. As a result, there is a great deal of difference in the types of expertise and programs which require directed assignments for teacher leaders. More specifically, schools and communities are quite diverse with respect to social conditions such as the following: culture, ethnic majorities, retention rates, drug use, family structures, nutritional habits, values, economic sufficiency and stability, neighborhood housing arrangements and crime rates. School/business partnerships are types of supportive programs which have attempted to*

recognize these social and academic concerns explicitly; they would lend themselves especially well to job enlargement assignments.

(2) *Academic assignments which are associated with the goals of the career ladder program include areas such as curriculum development, measurement of student progress, mentoring, classroom coaching, modeling, clinical supervision, and evaluation of peers. Job enlargement also requires explicit consideration and task assignments regarding psychological, physical, and emotional variables, since these factors are closely related to individuals' ability to achieve.*

c) Recommended Program Continuations and Modifications. Based on the legislative guidelines and the research and evaluation findings, the following recommendations are in order:

(1) **The requirement for "additional responsibilities" should continue to be a key element in changing and improving school operations which have the greatest positive effect on the development of teaching skills and student progress.**

(2) **As districts progress through the developing, transitional and effective schools models, job enlargement assignments should be refined to meet ongoing identified and profiled improvement needs.** For example, preliminary instructional assignments may consist primarily of curriculum development and validation of student measurement procedures, while corresponding social assignments at this stage may involve working on retention or parent/school programs. Once the district qualifies for an effective schools model, greater attention would be focused on activities such as mentoring novice teachers, as well as refining internal programs designed to connect

teacher performance with student achievement by applying the latest technological innovations.

(3) **The extended time involvement which is necessary for implementing effective job enlargement should be explicitly incorporated into legislative policy.** Teachers at the top levels of the ladder who are receiving executive salaries should be awarded contract extensions equivalent to those of other professions.

(4) **Legislation should be modified to require administrative and governing board approval of all job enlargement assignments.** Neither the career ladder steering committee nor any other single internal organizational unit should be held totally responsible for developing or implementing job enlargement assignment decisions. The requirement of approval at the district level would insure that the local governance procedures would continue to meet both community and school needs which have been openly and publicly identified and approved.

4. Salary, Finance and Budgetary Considerations. The issue of program funding warranted special attention from the Task Force for a number of key reasons. The total amount of available funds for educational improvement, as well as the motivational aspects of salary as a teacher incentive, are instrumental factors in energizing and mobilizing this educational reform movement.

a) Related Legislative Guidelines. Teacher salary and "restructuring of the salary schedule" was included in Section 5, paragraph 7 of the legislation and states, in part, the following:

> "7. A compensation system which is based on a completely restructured salary schedule in which a salary range is set for each level on the career ladder and the salary for a teacher within the range is based on objective performance evaluation or other objective factors. The salary schedule shall not be the traditional schedule based on experience and education

with additional stipends added on for higher levels. If participation in the career ladder program is optional, the traditional salary schedule may be retained for those teachers who choose not to participate in the program."

Through Section 6, paragraph A of the policy, accepted school districts were provided the "approval to budget for career ladder programs," as follows:

"1. For fiscal year 1986-1987, 2.5 per cent.
2. For fiscal year 1987-1988, 3.7 per cent.
3. For fiscal year 1988-1989 and 1989-90, 5.0 per cent."

b) General Research Findings. *The Center's ongoing research studies have consistently identified the motivational impact of higher teacher salaries as a significant extrinsic incentive for teachers to assume expanded responsibilities and extended time commitments. The absolute dollar amount of the increase is not the critical factor. Rather, it is the establishment of some basis of monetary recognition of teachers for increased competency and performance. In other words, there needs to be a systematic means of meaningful differentiation in monetary rewards given to teachers. Provided that such a policy is in place, it has been found that there are also several intrinsic factors, such as professional recognition and satisfaction with the work environment, which may be as strong an incentive as pay itself. Large salary increases, in fact, have been extremely negative and de-motivational in those districts which currently lack objective and valid procedures to determine the hierarchical expertise of their teachers with respect to curricular content and student progress.*

The process of budgeting for the career ladder program has been very beneficial to all of the districts. However, the practice of planning for yearly increases has not proven to be economically or financially effective. Participating districts should instead be funded based on their respective developmental stages or readiness levels. Automatically providing large amounts

of funds to those districts which lack readiness can, in effect, serve to perpetuate existing organizational weaknesses, instead of fostering positive change and improvement efforts.

c) Recommended Program Continuations and Modifications. As a result of budgeting and funding, most districts and teachers have made tremendous advancements toward meeting Career Ladder program goals. However, certain modifications of existing practices are essential in order to attain even greater economic and financial advantages. Based on the legislative guidelines and the research and evaluation findings, the following recommendations are suggested:

(1) **As established by current legislation, the compensation system should continue to follow a "completely restructured salary schedule;" in addition, teachers should continue to be rewarded for "objective performance evaluation or other objective factors." However, instead of explicitly stating a dollar amount for the "salary range," it is recommended that a differentiated percentage be used in order to reallocate total available program funds more equitably among the participants.**

(2) **The decision as to whether the career ladder program should be required or optional for teachers should be made by each district on a local level. Furthermore, if the program is expanded statewide, it should be *voluntary*. That is, only those school systems wishing to participate would adopt a procedure of rewarding teachers based on performance, rather than solely on years of experience and accumulated college credit hours.**

(3) **A certain percentage of program funds should be earmarked for recognition of participation in inservice programs (i.e., leave of absence for personal study), as well as for differential performance levels.** The primary purpose of such a policy would be to attempt to alleviate the problem of teacher burn-out. That is, teachers have tended to over-extend themselves in their drive to earn recognition for their work efforts. The proposed corrective policy is designed to address this problem by capitalizing on the positive nature of intrinsic rewards.

(4) **Career ladder districts should be funded based on their model level of organizational performance; i.e., placed in developing, transitional or effective schools levels determined through a three-year cycle of evaluation and improvement.**

It is recommended that the Task Force review modifications to the current budget formula. The following are offered for committee consideration:

(a) Funding Base x Special Factors x ADM x CL Base

(b) Funding Base x Special Factors x ADM x (CL Model Base x CL Teacher Proportion)

(c) Funding Base x Special Factors x ADM x (CL Model Base x CL Teacher Proportion x Experience Factor)

(d) Funding Base x Special Factors x ADM x (CL Model Base x CL Teacher Proportion x Experience Factor x Resource Factor)

Letter (a) above depicts the present budgetary formula for career ladder districts, while (b) through (d) add factors which should be studied and

considered for modifications. A brief definition of new terminology is provided below:

CL Model Base represents the maximum limits of funding available within the three levels of developing, transitional and effective schools model assignment (i.e., ranges of 2 to 3%, 4 to 5%, and 6 to 7%).

CL Teacher Proportion is the percentage or participation rate of teachers within each district. This should only be applied to the effective schools model if limitations are placed on the percentage of teachers allowed into developing and transitional models.

Experience Factor is a weighted adjustment factor for those districts which have a large number of teachers with relatively few years of experience but who are performing at high levels.

Resource Factor is an adjustment for those districts which suffer from an unequal financial base and lack the resources of other, more affluent communities.

FINAL SUMMATIVE EXTENSION OF PROGRAM RESEARCH AND EVALUATION FOR JLCCL AND TASK FORCE CONSIDERATION

This portion of the "Final Summative Report IV" is an extension of the initial Task Force assignment in order to add the following items: (1) to expand evaluative response to legislative guidelines not previously reported; (2) to address specific legislative staff questions identified as needing attention; and (3) to recommend additional policy which involves important elements not previously included in the legislation.

A. Expanded Evaluative Response to Legislative Policy and Staff Questions

1. Future Legislative Involvement. A major consideration for Task Force resolution relates to the question of whether the Legislature should cease to continue any involvement in the career ladder policy after completion of the pilot-test.

   a) Related Legislative Guidelines. In 1988, S. B. 1195 essentially included the original policy guidelines of S. B. 1336 (developed in 1985) and S. B. 1384 (revised in 1986). It also re-established and expanded the *Joint Legislative Committee on Career Ladders*. S. B. 1195 (Section 4, A.) states, in part,

> "A joint legislative committee on career ladders is established consisting of five members of the senate education committee appointed by the president of the senate, five members of the house of representatives education committee appointed by the speaker of the house of representatives, one educator appointed by the president of the senate, three members of the state board of education appointed by the speaker of the house of representatives and president of the senate. . . ."

b) General Research Findings. *The "Model of Interrelated Components of Program Support and Focus for Effecting Change and Reform in Education" is the result of five years of study related to reform movements and career ladder programs across the nation (see Figure 2, p. 41, for a sample copy of the model). "Legislative Guidelines" is at the base of the model, depicting its foundational importance in directing and supporting educational reform and change. Legislative policy and involvement has been crucial in determining the levels of success of various programs. Evaluative observations indicate that an oversight committee with the power to develop and implement policy cooperatively is a key element in assuring that program goals are met and that they continue to be refined and improved in the future. Educational change and reform has failed in the past, due to excessive diffusion of responsibility and a lack of clear intent and action in requiring direct and specific accountability. Components of government bureaucracies have a tendency of traditionalizing and solidifying after legislation is "completed" and transferred to other agencies, without ongoing formal channels of communication and cooperation for instituting necessary program revisions through planning, development, change and improvement.*

c) Recommended Program Continuations and Modifications. Based on legislative guidelines and the research and evaluation findings, the following recommendations are in order:

(1) A joint legislative committee should continue to function as a crucial component to oversee and assure continuing program development and improvement. As in the past, the committee structure should provide for a balance of members representing government officials, educational professionals and business and industry representatives.

(2) The committee should convene every three to five years to receive evaluative reports on program progress, as well as to forward appropriate revisions and to make decisions about future program continuation.

2. Teacher Input and Ownership. A primary goal of the career ladder legislation was to provide for involvement of teachers in program planning.

a) Related Legislative Guidelines. Section 5, "Requirements for career ladder plan" essentially remained the same with respect to teacher input for Senate Bills 1336, 1384 and 1195.

> "Sec. 5. Requirements for career ladder plan. To receive approval to budget for a career ladder program as provided in section 4 of this act, a school district's career ladder plan must contain the following:
>
> 1. Evidence that the plan was developed in consultation with the district's teachers. . . ."
>
> to Sec. 5., #12, which states the following:
>
> 12. "Evidence of the extent of support for the plan by the teachers in the school district. If there is no consensus among the teachers of the school district, statements both from those opposing the plan and from those supporting the plan shall be included in the plan."

b) General Research Findings. *The three interrelated areas of the model which are most directly affected by teacher involvement in the planning of programs within which they must work are the following: (1) Professional Input and Ownership; (2) Motivation; and (3) Organizational Factors of Climate, Communication, Interpersonal Relationships, Psychological/Emotional Well-*

being, etc. (See Figure 2, p. 41, for a copy of the model). Programs which have instituted the greatest amount of planning and expanding involvement of teacher leaders have also been the most successful. Individuals are motivated to complete tasks at a higher level of performance when they are treated in a mature adult manner, as well as trusted and supported to "do their jobs" as professionals.

Teachers in those organizations which practice open, positive, and clear communication and establish a cooperative environment have also shown correspondingly higher levels of appreciation for the career ladder concept. Several districts have established steering committees which are predominantly composed of teachers; however, other districts have isolated committee operations and have depreciated the advantages of program integration within the total educational system. When teacher leadership within a district is opposed to the program, the results are essentially a waste of state and local resources.

c) Recommended Program Continuations and Modifications. Based on the legislative guidelines and the research and evaluation findings, the following recommendations are in order:

(1) Teachers should continue to provide input into programs at all levels, but they should have a greater role than simply that of a "consultant". At a minimum, legislative policy should officially recognize the importance of professional teacher input into all of the following areas: planning, implementing and evaluating programs for initiation of needed development and changes.

(2) Before being approved for initial or ongoing funding for a career ladder program, districts should be required to demonstrate a majority support of teacher and administrative personnel by confidential ballot.

3. Program Plans, Designs and Structures. The legislative guidelines clearly specified that a well-developed plan is necessary for implementation and approval. Therefore, the Joint Legislative Committee has provided greater policy specificity over the pilot-test period.

This section of the report will list those parts of the law in Sec. 5. *Requirements for career ladder plan,* which have been targeted as important components of the research and evaluation activity but not previously addressed in other areas of the summative documents. The "General Research Findings" and "Recommended Program Modifications and Continuations" will follow the same order of listing.

a) Related Legislative Guidelines. Section 5. Requirements for career ladder plan, states, in part:

"To receive approval to budget for a career ladder program as provided in section 4 of this act a school district's career ladder must contain the following:"

(1) Paragraph 3 relates to **professional advancement** as follows:

"A description of the career ladder which provides opportunities to teachers for continued professional advancement, . . ."

(2) Paragraph 4 discusses **education as a requirement** and states, in part,

"Education as a requirement for advancement shall be related to advanced performance or expertise and a minimum number of unspecified credits shall not be used as a criteria for advancement."

(3) Paragraph 6, (c) provides for **teacher improvement** as follows:

"(c) Opportunities for improvement of teacher performance."

(4) Paragraph 9 relates to **implementation plans,** as follows:

"Plans for implementation of the career ladder program for teachers."

(5) Paragraph 10 provides for **periodic program evaluation,** as follows:

"A plan for the periodic review of the career ladder program for teachers which includes who is conducting the review,

how the review is performed and the time line for the review."

(6) Paragraph 11 relates to **administrative evaluation**, as follows:

"A description of how the school district's faculty development program and system for evaluating principals will be revised or adapted to provide support for the career ladder program for teachers."

b) General Research Findings. *Research and evaluation indicates that most districts are doing an excellent job of developing and improving* ***program plans, designs and structures.*** *These documents are clearly providing specific patterns for systematic* ***professional advancement*** *which are linked to differing levels of performance and are based on specific evaluation criteria. While all districts have developed excellent plans and guidelines, their readiness levels with respect to successful implementation of these designs is extremely diverse.*

Education as a requirement which is tied to performance and assessed improvement needs of teachers is a rational and effective path to faculty development. This procedure focuses energies on local instructional and school needs. Even though it is standard procedure, randomly taking courses for college credit which may not relate to improving teachers' skills, students' learning or improved professional activities has not proven to be an effective practice.

The career ladder program has been extremely successful in focusing school systems' efforts and resources on providing opportunities for ***improvement of teacher performance.*** *Whether provided by internal sources or by outside consultants (i.e., universities and professional experts),* ***inservice education*** *has increasingly met the assessed needs of schools and teachers. Research indicates that teachers see opportunities for improvement of their performance as a significant* ***intrinsic motivator.*** *The career ladder program*

allows teachers to identify their own needed areas of improvement, and it is extremely motivating to them to realize positive changes in effectiveness. Initial research findings suggest, in fact, that this motivational factor may be as important as the extrinsic reward of money.

***Implementation plans** of program designs and structures have been well developed in accordance with the time lines specified by the JLCCL. Requiring diverse districts to implement plans according to identical time schedules is inefficient and uneconomical. For several districts, implementation of the comprehensive and complex requirements of the career ladder program policy has resulted in extreme hardship and negative conditions; furthermore, in some cases it has been very destructive to morale.*

*Beyond external program evaluation, **periodic program evaluations** are a necessary internal activity for change and improvement. This requirement has caused districts to focus on their own specific needs as well as to develop local program evaluation functions and procedures which were formerly nonexistent.*

*Developing teachers in isolation, without concomitantly developing other key components, has been a major reason for past failures in reform programs. Therefore, **administrative evaluation and development** is crucial to the success of faculty and student evaluation and improvement. Districts have expended considerable effort in upgrading administrative personnel who work closely with the evaluation and instructional processes.*

c) Recommended Program Continuations and Modifications. Based on the legislative guidelines and the research and evaluation findings, the following recommendations are suggested:

(1) The career ladder program should continue to require districts to provide well-planned designs and structures guidelines which clearly define the different career levels, as well as requirements for serving on those levels,

and the necessary processes and procedures for advancement. Plans for professional advancement should be adjusted to meet the needs for implementation time and readiness level capabilities of each individual district, in order for it to be able to differentiate staff based on performance. These concerns would be addressed by assessment of district readiness levels, profiling organizational needs and placement on one of the three proposed alternative readiness levels.

(2) Career ladder policy should require that continued education and inservice of teachers be tied to assessed improvement needs and performance levels.

(3) The career ladder program should also continue to require provision of opportunities for improvement of teacher performance. Since improvement in ability to teach and to provide leadership through direct influence of important district programs has been found to be highly motivating, districts should continue to focus more attention on this significant intrinsic reward.

(4) Requirement for approval as a career ladder district should continue to be based on a well-planned document which clearly defines the conditions and steps for teacher career advancement. Should the program be expanded to include other state districts, current plans would provide excellent models and guides for new participants.

(5) Internal periodic review by districts is essential. In addition, the legislation needs to be strengthened by requiring an integrative research and development component to conduct the following activities: (a) documentation of program progress over a long-term period; (b) coordination of interrelated district programs; and (c) study and documentation of progress related to the effect of teacher performance on student learning.

(6) Administrative evaluation based on effectiveness in providing support for the career ladder program for teachers should be modified to require more than a simple description of the existing program. All approved districts should be held accountable for meeting the program intent of developing or maintaining the expertise required for teacher support.

4. Outside or "Third-Party" Research and Evaluation. Career ladder legislation provided for evaluation of the program by a source which is external to special interests, as well as spheres of influence of districts and teachers involved.

a) Related Legislative Guidelines. Section 7, Study of career ladder programs relates to provisions for program research and evaluation as follows:

> "The center for excellence in education at a state university designated by the Arizona board of regents shall conduct a study of the career ladder programs implemented by the school districts which budget for career ladder expenses . . ."

b) General Research Findings. *On July 20, 1989, the researchers presented "A Chronology of Research and Evaluation Procedures for Assessment of the Pilot-Test Career Ladders Teacher Performance and Incentive Programs, 1985 to 1990." This publication documented the research and evaluation project procedure for policy development and recommendations* (See Figure 1, p. 39, for a model depicting data collection, analysis, reduction and reporting procedures). *Ongoing research consists of continued expansion of the most sophisticated research and statistical designs and methodologies available, and into greater specificity of studying questions which arise from this type of comprehensive research activity.*

The University of Arizona and Arizona State University have cooperated in applying considerable time and expertise to the development and implementation of research instrumentation. In addition, ASU is continuing a state-wide study of the important elements of teacher performance and student achievement. The

Far West Laboratory has reviewed the research documents and provided information as to their own experiences with other state evaluations. The Rand Corporation, in cooperation with several university research organizations, is studying the process of effective policy development through use of objective research to support public decision makers and legislation within governing bodies.

The Arizona legislature chose a wise course when it established a pilot-test procedure of several years' duration. Objective research and evaluation is a key to successful change and reform of complex social systems.

c) Recommended Program Continuations and Modifications. Based on five years of experience in researching and evaluating the career ladder program, the following recommendations are suggested:

(1) As established by current legislation, the existing career ladder programs should continue to be researched and evaluated by the Center for Excellence in Education at Northern Arizona University in cooperation with ongoing studies being conducted by Arizona State University and individual career ladder districts. Cooperative efforts in supporting doctoral study should be encouraged at all three state universities.

(2) Legislation should be modified to include an assessment and profiling responsibility provided by the outside evaluators. Districts would then be placed into one of the three models: developing; transitional or excellent schools levels. Districts would also be provided specific information about support and focus components needing improvement.

(3) Responsibilities of the research and evaluation center should include assistance to districts in the planning and implementation of their own internal R & D programs.

5. School District Governing Boards. As it relates to the local board, legislative content predominantly addressed the budgetary relationship between state funding and formulas for local expenditures. It also required "Phase III" districts to follow a specified "career development evaluation model" which was supported by the organized teaching profession.

   a) Related Legislative Guidelines. A sample statement related to budget and the specified evaluation model can be found in section 8., Provisions for career ladder programs based on a career development evaluation model. It states, in part:

   "A. The governing board of any school district not already budgeting for a career ladder program may apply to the joint legislative committee on career ladders for approval to budget for a career ladder program based on a career development evaluation model beginning with fiscal year 1987-1988 as follows:"

   b) General Research Findings. *All available research to date which has been directing formulation of the Center's model of organizational support and focus components has substantiated the importance of the local governing board. More specifically* ***the governing board in the district has been shown to be a key interrelated support component, one which maintains a unique and central role in the success of career ladder programs.*** *Governing boards which understand and support the principle of rewarding teachers based on competencies and performance related to student achievement have realized a much greater amount of positive support for appropriate change and improvement. On the other hand, those boards which have shown little interest in the career ladder program, or have used it as a tool to forward their own political interests and personal animosities, have been very destructive to successful reform and improvement.*

The "career development evaluation model" required for Phase III districts was not validated prior to legislating its implementation. This model should be specifically studied to determine if it is a valid means of realizing the goals of the career ladder program.

c) Recommended Program Continuations and Modifications. Based on five years of experience in researching, evaluating and building the resultant model of interrelated organizational support and focus factors, the following recommendations are suggested:

(1) Legislation should be modified to require governing boards in those districts which request and are approved for career ladder funding to understand both the goals of the program and their responsibility to support the reform and change needed within the district, in order to assure maximally effective and efficient expenditures of funds.

(2) Local boards should be assessed by the "third-party evaluator," along with the other organizational components in the district, to determine their level of understanding and support for the career ladder concept. If they are insufficiently prepared to provide adequate support, they should then receive specially targeted inservice assistance.

(3) Several important concepts related to the CL legislation are the focus of an ongoing research study, i.e., recruitment/retention, motivation, research bias, support of the organized profession, applications of the support and focus model, and the ASU/NAU teacher performance/student achievement research. The "career development evaluation model" for Phase III districts is one of several components which warrants considerable attention and further analysis. This model should be studied and validated prior to its required adoption by individual districts. Until its value is more

clearly understood, new districts should be allowed a choice of all available proven models being utilized by successful career ladder districts.

B. Additional Guidelines for Legislative Inclusion. Other issues not addressed by current career ladder legislation have become evident during the first five years of research on impact and effectiveness of the law on improved teaching conditions and student achievement. Three especially important recommended additions which require immediate attention relate to the following areas: (1) a professional network; (2) educational specialists; and (3) funding of program research and evaluation.

1. Professional Network. The "Career Ladder Pilot-District Network" is a committee composed of representatives from each of the career ladder districts. One of the sub-groups within this committee is a research division.

a) General Research Findings. *In general, the network serves a very important function of communication between districts and policy-making bodies. Specifically, the organization has been invaluable in its cooperation and assistance with the ongoing research and evaluation efforts. This type of support component is needed within the total interrelated system, mainly to serve as a dynamic and creative unit which is not directly tied to the more traditional standardized operations of bureaucratic agencies required to carry out stated policy. While it is not, and should not, be a policy-making body, the network can serve to make recommendations and support needs for improved legislation in the future.*

b) Recommended Program Additions. Based on five years of program evaluation, the following recommendations for policy additions are proposed:

(1) The law should be modified to include a network which functions outside the jurisdiction and influence of present governing bodies.

(2) Districts approved for career ladder funding should be required to become members of a professional network, for the purpose of assisting each other

in program improvement, as well as making recommendations to governing bodies for needed policy refinements and changes.

2. Educational Specialists. Educational specialists who come into direct developmental contact with students (i.e., school psychologists, counselors, library or media center personnel and nurses) were not explicitly included in the legislation. Only the teaching staff who have direct classroom contact with academic subjects which have traditional methods of evaluation were considered.

   a) General Research Findings. *The exclusion of educational specialists from career development opportunities afforded to the regular classroom teachers, while probably due to oversight, has not served to enhance the effectiveness of school organization. Considerable knowledge and evidence supports the fact that students have little chance of learning well if they are socially, emotionally (psychologically), or physically impaired, or if they fail to acquire the necessary skills to locate and comprehend knowledge in libraries and other organized resources.*

   Another finding relates to special-area teachers in the creative arts, certain vocational courses and in the special-education and physical-education areas. While they constitute "teachers" according to career ladder specifications, evaluation of their levels of performance and development are considerably lacking in methodologic sophistication.

   b) Recommended Program Additions. Based on five years of program evaluation, the following recommendations for policy additions are suggested:

      (1) Educational specialists should be included within the staff definition which is explicitly recognized as influencing student growth and related academic achievement.

(2) The curriculum (i.e., the planned learning experiences under the schools' jurisdictional responsibility) which educational specialists apply should be documented and validated.

(3) An evaluation system should be developed to assess the level at which specialists are performing their respective established curricular roles and functions.

(4) Educational specialists in "developing schools" should have the same opportunities for job enlargement assignments as regular teachers.

(5) In most school districts special-area teachers (i.e., art, music, band, physical education, pre-school and kindergarten) are as different in their assigned responsibilities as educational specialists; therefore, they may require a separate curriculum and evaluation system.

3. Funding of Third-Party Research and Evaluation. While the Career Ladder legislation provided for outside research and evaluation, it failed to establish a formal means of financing for conducting this evaluative activity. Therefore a critical **recommended program addition** is to make explicit provision for evaluation expenditures as a separate line item in future budgets.

C. Evaluation of Program Support Needs Outside Current Career Ladder Policy

1. University Role, Responsibilities and Needs for Change. In order to serve as a more positive support for the student and instructional needs of education generally, universities should be encouraged to review and revise curricula to which future teachers are exposed. Key deficiencies observed to be predominant with respect to teachers practicing their professional responsibilities relate to the following knowledge and skill domains:

a) Professional Level Understanding of Principles or Laws of Human Development from Early Childhood through Adolescence

b) Academic Knowledge within the Full Range of Content Taught

c) Knowledge of Social, Emotional and Psychological Development Associated with a Wide Range of Cultures, Economic Levels and Living Conditions

d) Understanding, Knowledge and Skills in the Use of Quantitative and Qualitative Assessment and Evaluation of Students' Social and Emotional Progress and Academic Learning

2. Teacher Certification and Licensing. Certification policy should be reviewed to determine the adequacy of present requirements for high-quality instructional personnel, in order to fulfill its function as a positive support in promoting teachers' knowledge and skills development.

3. Influence of Community and The Private Sector. School/Community partnerships are key ingredients to improved learning environments. Through the career ladder concept, job enlargement of teacher leaders and educational specialists can be a very positive element for needed expansion of program association and development. Specific and targeted programs which directly involve parents and community agencies and leaders should be encouraged.

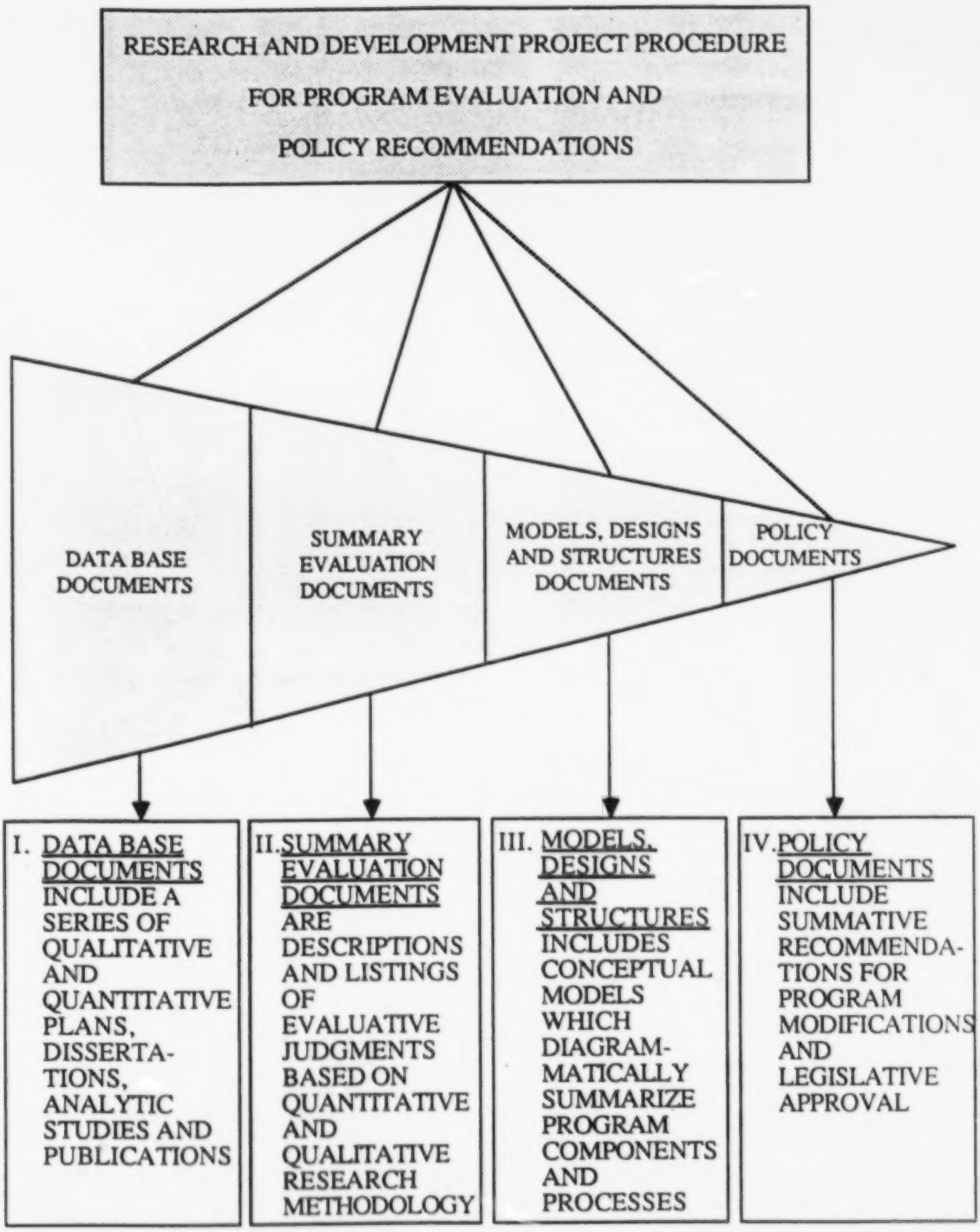
The private sector, such as business, industry and foundations, have exerted significant influence with specific programs. For example, business and industry has had considerable experience in the kind of work environment which produces the greatest and most positive performance and production. It would therefore be beneficial for school organizations to team up with the private sector and work on the systems' organizational structure and procedures of operation. The interrelated support and focus factors which relate to such joint efforts have been identified. Education critically needs outside assistance in refining these essential organizational components. In particular, education requires support which is not confined to isolated

components of essential operations; that is, the total system must be functioning on a high level before effective progress can be accomplished.

Conclusion

If the career ladder program continues as recommended by the evaluators, and if it is expanded to allow an application and approval process for other Arizona school districts, the present Career Ladder districts should continue to be funded at current levels for a three-year period. At the end of that period of time, those districts not meeting the requirements of the Effective Career Ladder Schools Model would be placed at a developing or transitional level and receive appropriate funding for that particular stage of development. Additional schools would be admitted to the program at an approved rate based on the state's funding capabilities and according to their respective assessed model levels.

Figure 1

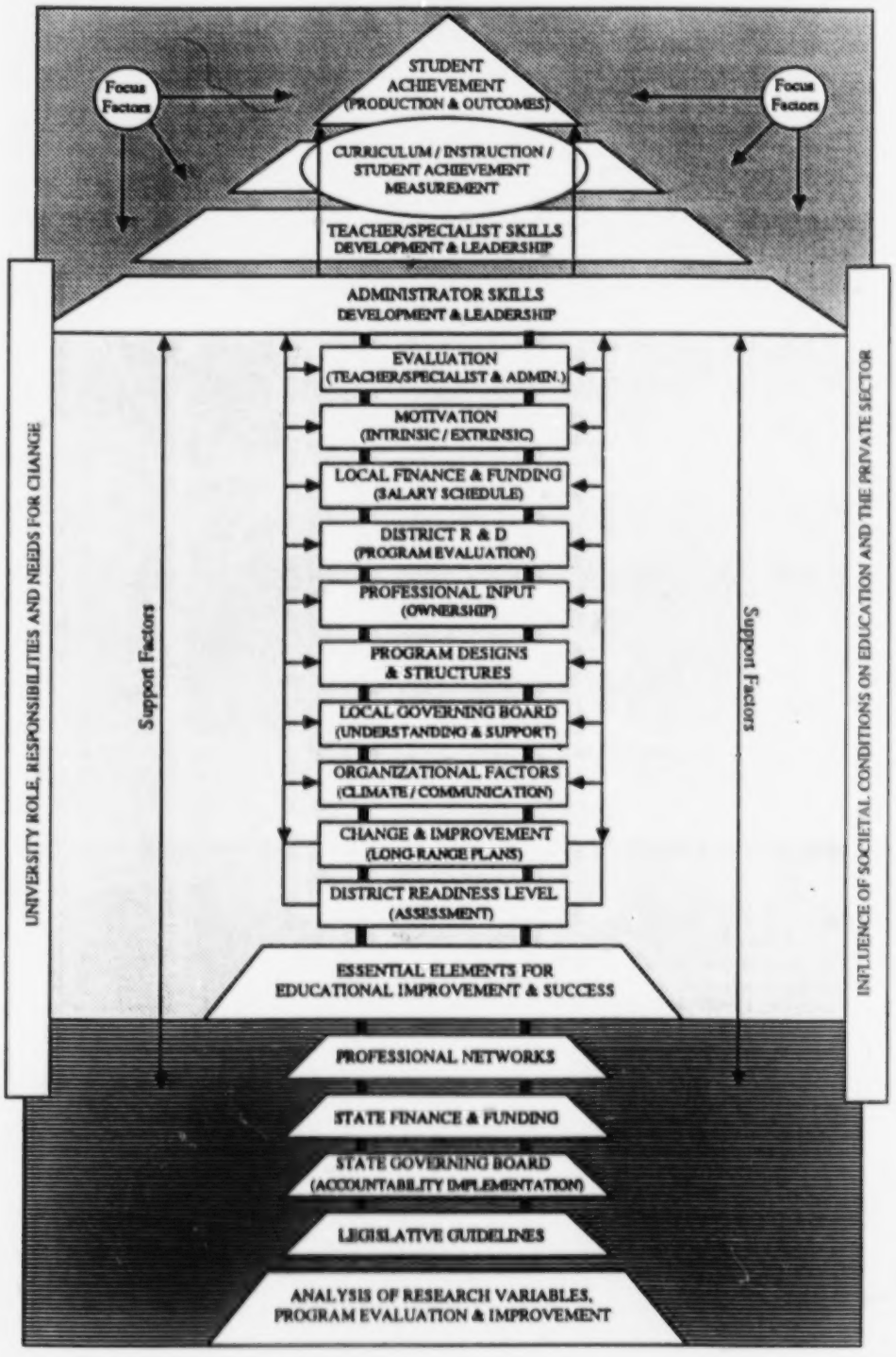

RESEARCH AND DEVELOPMENT PROJECT PROCEDURE
FOR PROGRAM EVALUATION AND
POLICY RECOMMENDATIONS
DATA BASE DOCUMENTS
SUMMARY EVALUATION DOCUMENTS
MODELS, DESIGNS AND STRUCTURES DOCUMENTS
POLICY DOCUMENTS
I. DATA BASE DOCUMENTS INCLUDE A SERIES OF QUALITATIVE AND QUANTITATIVE PLANS, DISSERTATIONS, ANALYTIC STUDIES AND PUBLICATIONS
II. SUMMARY EVALUATION DOCUMENTS ARE DESCRIPTIONS AND LISTINGS OF EVALUATIVE JUDGMENTS BASED ON QUANTITATIVE AND QUALITATIVE RESEARCH METHODOLOGY
III. MODELS, DESIGNS AND STRUCTURES INCLUDES CONCEPTUAL MODELS WHICH DIAGRAMMATICALLY SUMMARIZE PROGRAM COMPONENTS AND PROCESSES
IV. POLICY DOCUMENTS INCLUDE SUMMATIVE RECOMMENDATIONS FOR PROGRAM MODIFICATIONS AND LEGISLATIVE APPROVAL

Model Depicting Documentation Procedures of Data Analysis, Reduction and Reporting for Policy Recommendations

Figure 2

MAPPING THE DEVELOPMENTAL PROCESS
FOR EFFECTIVE SCHOOL REFORM:

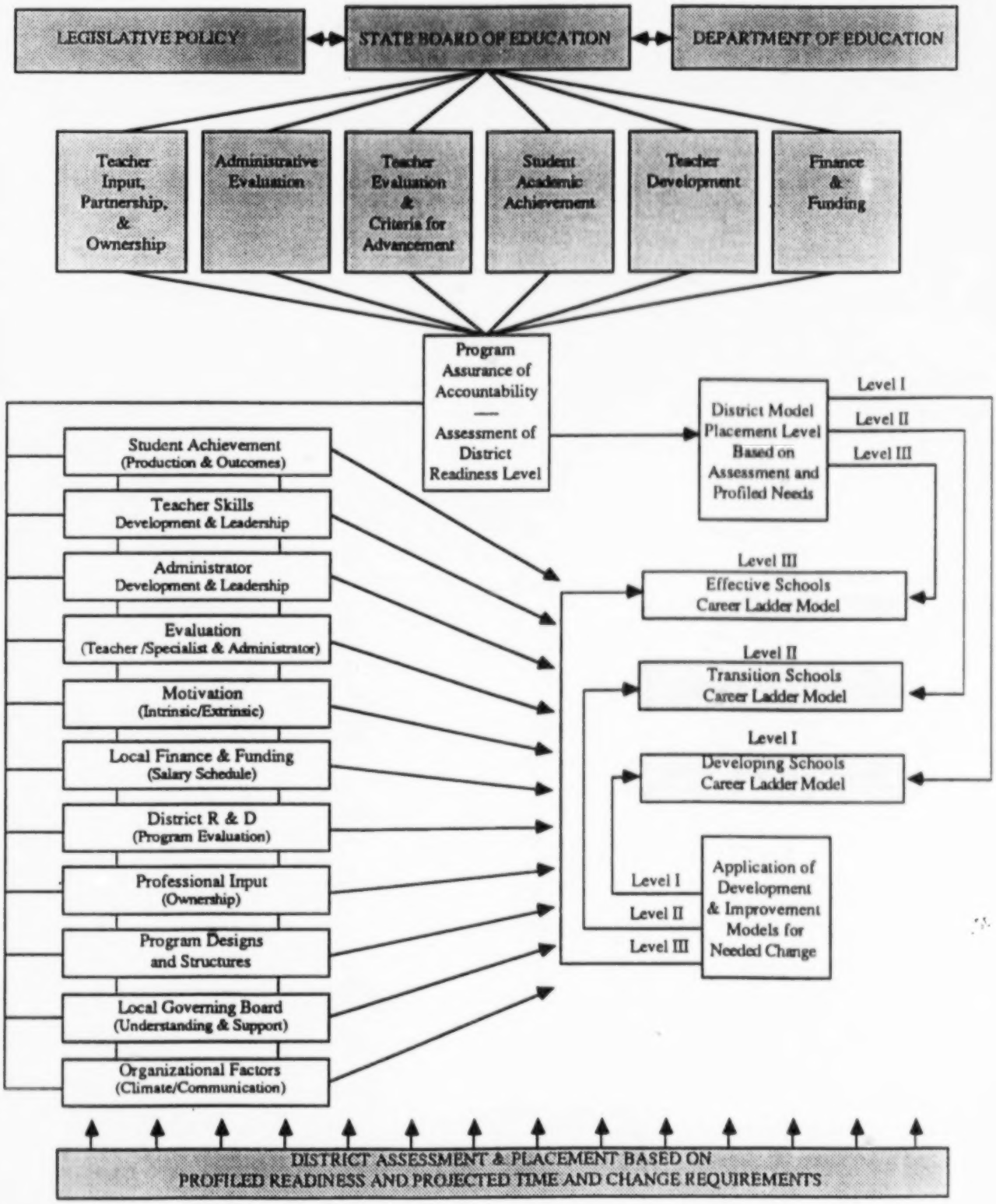
Designs and Structures


Focus Factors
STUDENT ACHIEVEMENT (PRODUCTION & OUTCOMES)
Focus Factors
CURRICULUM / INSTRUCTION / STUDENT ACHIEVEMENT MEASUREMENT
TEACHER/SPECIALIST SKILLS DEVELOPMENT & LEADERSHIP
ADMINISTRATOR SKILLS DEVELOPMENT & LEADERSHIP
UNIVERSITY ROLE, RESPONSIBILITIES AND NEEDS FOR CHANGE
Support Factors
EVALUATION (TEACHER/SPECIALIST & ADMIN.)
MOTIVATION (INTRINSIC / EXTRINSIC)
LOCAL FINANCE & FUNDING (SALARY SCHEDULE)
DISTRICT R & D (PROGRAM EVALUATION)
PROFESSIONAL INPUT (OWNERSHIP)
PROGRAM DESIGNS & STRUCTURES
LOCAL GOVERNING BOARD (UNDERSTANDING & SUPPORT)
ORGANIZATIONAL FACTORS (CLIMATE / COMMUNICATION)
CHANGE & IMPROVEMENT (LONG-RANGE PLANS)
DISTRICT READINESS LEVEL (ASSESSMENT)
Support Factors
INFLUENCE OF SOCIETAL CONDITIONS ON EDUCATION AND THE PRIVATE SECTOR
ESSENTIAL ELEMENTS FOR EDUCATIONAL IMPROVEMENT & SUCCESS
PROFESSIONAL NETWORKS
STATE FINANCE & FUNDING
STATE GOVERNING BOARD (ACCOUNTABILITY IMPLEMENTATION)
LEGISLATIVE GUIDELINES
ANALYSIS OF RESEARCH VARIABLES, PROGRAM EVALUATION & IMPROVEMENT

A Model of Interrelated Components of Program Support and Focus
for Effecting Change and Reform in Education

Figure 3

Assessment Model for Projected
District Readiness Levels


LEGISLATIVE POLICY
STATE BOARD OF EDUCATION
DEPARTMENT OF EDUCATION
Teacher Input, Partnership, & Ownership
Administrative Evaluation
Teacher Evaluation & Criteria for Advancement
Student Academic Achievement
Teacher Development
Finance & Funding
Program Assurance of Accountability — Assessment of District Readiness Level
Student Achievement (Production & Outcomes)
Teacher Skills Development & Leadership
Administrator Development & Leadership
Evaluation (Teacher /Specialist & Administrator)
Motivation (Intrinsic/Extrinsic)
Local Finance & Funding (Salary Schedule)
District R & D (Program Evaluation)
Professional Input (Ownership)
Program Designs and Structures
Local Governing Board (Understanding & Support)
Organizational Factors (Climate/Communication)
District Model Placement Level Based on Assessment and Profiled Needs
Level I
Level II
Level III
Level III
Effective Schools Career Ladder Model
Level II
Transition Schools Career Ladder Model
Level I
Developing Schools Career Ladder Model
Level I
Level II
Level III
Application of Development & Improvement Models for Needed Change
DISTRICT ASSESSMENT & PLACEMENT BASED ON
PROFILED READINESS AND PROJECTED TIME AND CHANGE REQUIREMENTS

DISTRICT READINESS PROFI

SUPPO

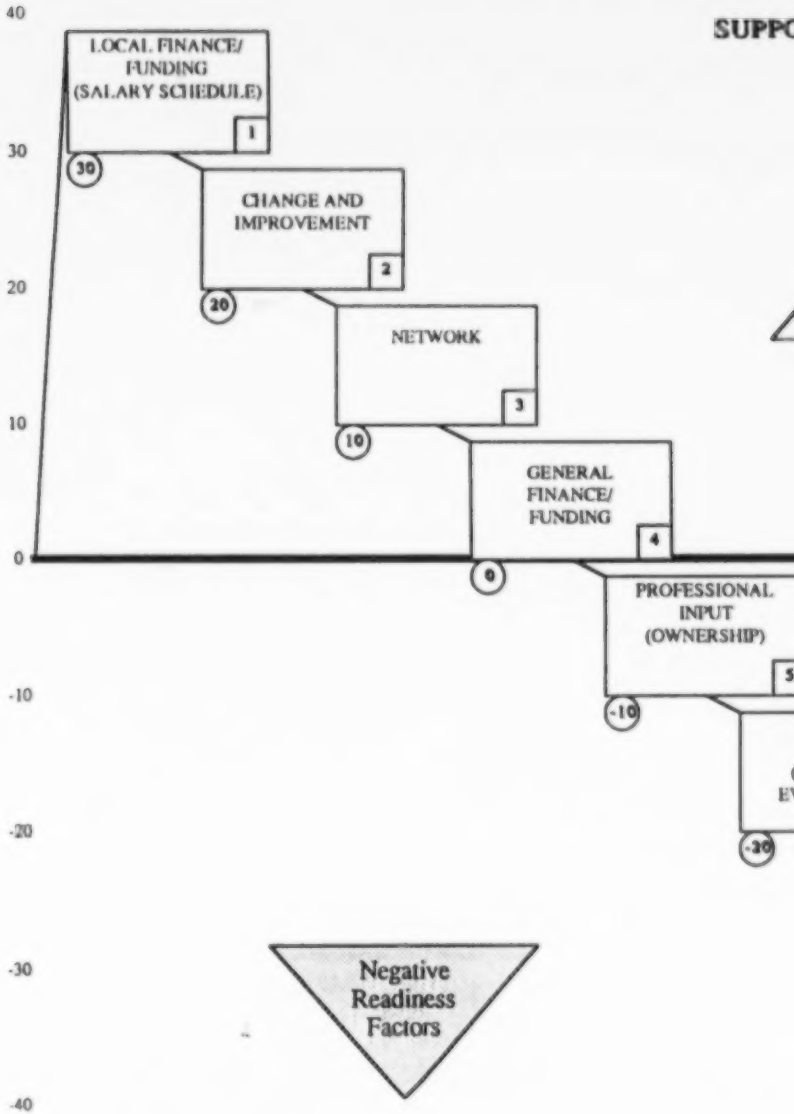


Figure 4

.E OF STRENTHS AND WEAKNESSES

)RT FACTORS

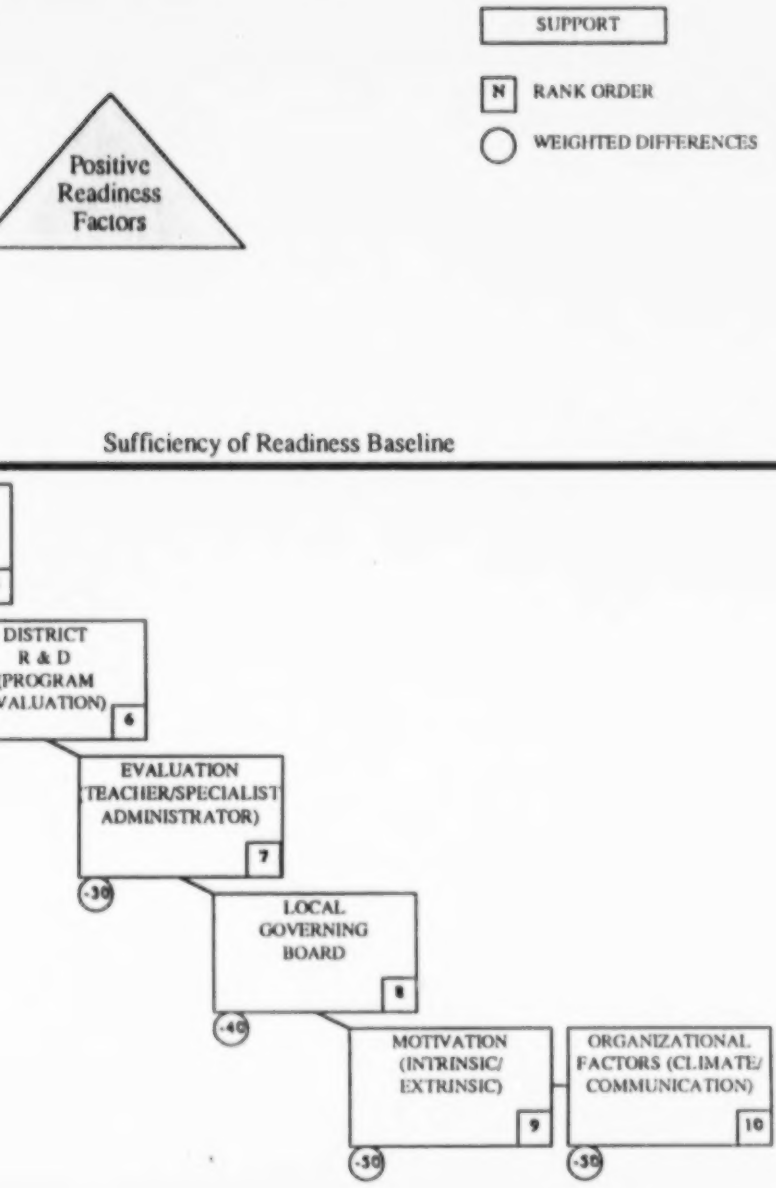


Figure 5

DISTRICT READINESS PROFILE OF STRENGTHS AND WEAKNESSES

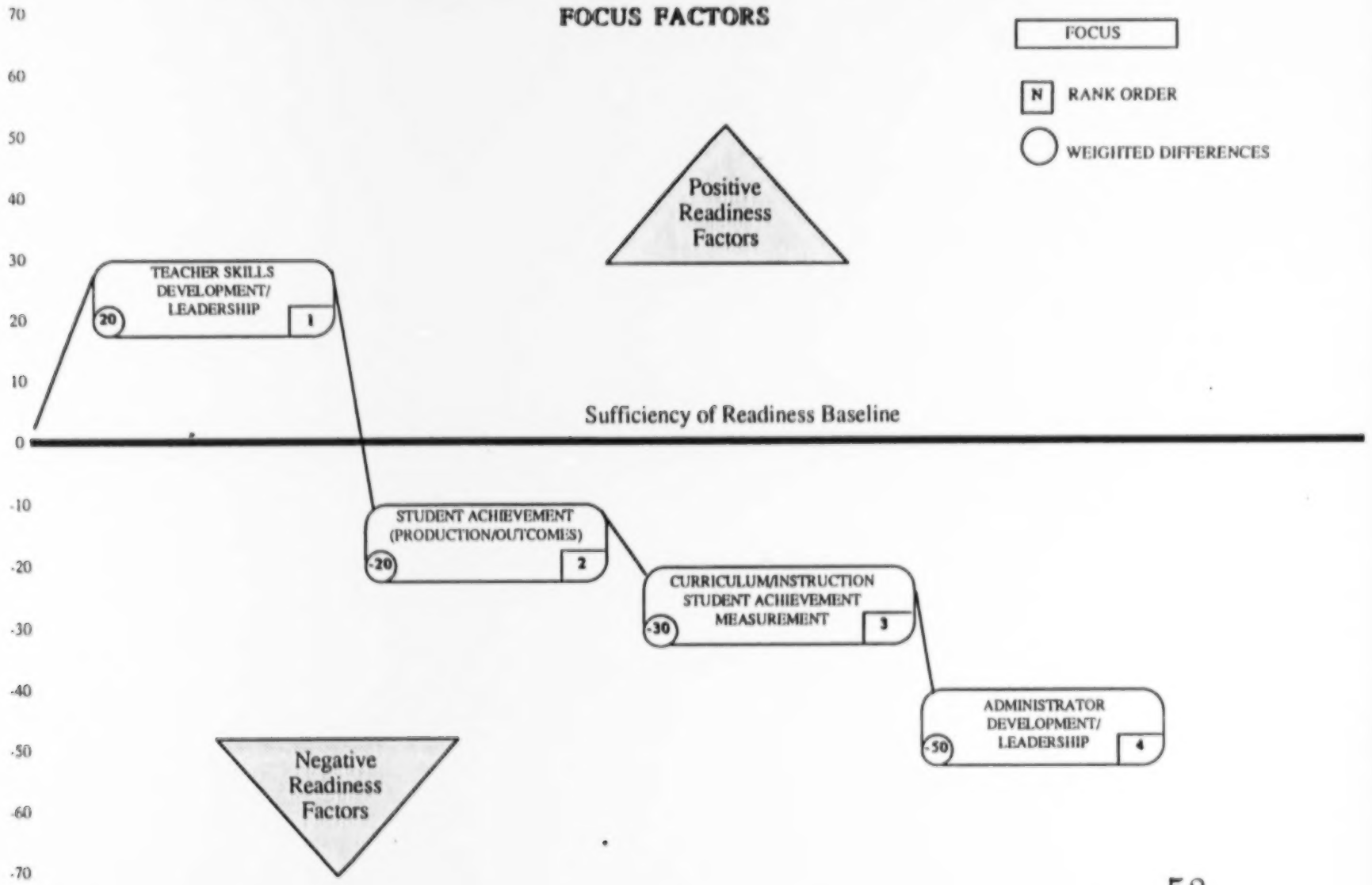


EXHIBIT I

Executive Summary

Interim Report to the
Joint Legislative Committee for Career Ladders
from
Arizona State University
October, 1989

Arizona State University

College of Education
School Personnel Evaluation and Learning Laboratory
Tempe, Arizona 85287-2111
602/965-2290

EXECUTIVE SUMMARY

INTERIM REPORT TO THE
JOINT LEGISLATIVE COMMITTEE FOR CAREER LADDERS
FROM
ARIZONA STATE UNIVERSITY
OCTOBER, 1989

The College of Education, Arizona State University, in cooperation with The Arizona Career Ladder Research and Evaluation Project, Center for Excellence in Education, Northern Arizona University, is assisting in the evaluation component of the Arizona Career Ladder Pilot Project. The ASU research team, comprising Dr. Gerald Helmstadter, Professor of Educational Psychology and Mary Walton, Research Assistant, was charged with examining two issues. First, is Career Ladder impacting student academic achievement? Second, what is the relationship between teacher evaluation ratings and student achievement? The ASU research team is entering the third and final year of its research project and will prepare its final report in Fall, 1990.

The following narrative highlights the primary components of the ASU research.

ASU-Career Ladder Executive Summary

Research Task 1.

ASU will conduct research which will evaluate the impact of Career Ladder policy on student academic achievement.

1. ASU is employing a state-of-the-art research method for evaluating the impact of public policy. They are using a student achievement index calculated from the annual statewide testing scores that controls for some student factors over which teachers have no control (such as IQ, age, gender, primary language, ethnicity), and then examining the trend line of this index from 1981 to present. This approach is most desirable because it allows comparisons to be made before and after Career Ladder implementation to determine if Career Ladder is truly changing student achievement. Student achievement trends are being examined separately for each district so that the impact of each district's particular method of implementing Career Ladder can be evaluated. In addition, each Career Ladder district's trend lines will be compared to the trend lines calculated for a matching non-Career Ladder district. This approach permits strong conclusions about the impact of Career Ladder implementation, since it allows comparison of what happens during the same period of time to student achievement in two similar districts when only one of them has Career Ladder in place.

2. Though targeted for a Fall, 1990 completion date, the ASU research team has stepped up the data analysis timeframe in hopes of completing evaluation of the Phase 1 districts by November, 1989.

Research Task 2.

ASU will conduct research which will examine the relationship between school districts' teacher evaluations and a separate index of teacher effectiveness which is based on student achievement.

1. Data for this research task have thus far been obtained from two Phase 1 districts. Examination of data from additional districts was suspended so that effort could be directed at speeding up the timetable for research task 1 above. Research on this task will resume in Spring, 1990.

2. Preliminary results (obtained from only two Career Ladder districts) showed that the index calculated from student achievement scores was indeed measuring the extent to which teachers help students learn academic material. It was also found, however, that each of the two districts' teacher

evaluation ratings were highly unbalanced, with most falling at the high end of the scale. Such a result means that while district-level evaluation methods may well differentiate between low and high performing teachers, they are less able to finely discriminate among high performing teachers, such as should comprise the Career Ladder ranks. This result has been found in other reported literature, and thus was not unexpected. It is hoped that future examination of the teacher evaluation schemes of other Career Ladder districts will bring forth information that will lead to identification of key components of a teacher evaluation process that permits adequate discrimination among performance capabilities.

EXHIBIT II

Positive Anecdotes From
the Pilot-Test District Network